Supervised Spatial Regionalization using the KLE and MST

The Readme.pdf file contains the brief descriptions of the supplementary files.

Data

The Data folder contains the two data files. "syndat.csv" is the simulated dataset. "ocean.csv" is the real data used. The code to simulate the first dataset is provided at "simulation/1.datsim.m".

Code

The folder "simulation" contains the codes for the simulated data. To generate the data, use "simulation/1.datsim.m". Otherwise, use the provided sample data and run the two codes "simulation/2.sample_process.m" and "simulation/3.MST.m" to find the spatial partitions. To generate the partitions from the kmeans and hclust clustering, one can then run "simulation/4.failure_kmeans.m" and "simulation/5.failure_hclust.m". Similarly, the folder "ocean" contains the codes for real-world data. Run the codes "ocean/1.dataread.m", "ocean/2.sample_process.m" and "ocean/3.MST.m" chronologically.

Image

The generated images used in the latex document are given in the folder "img".

Misc

The folder "misc" contains an example to compute KLE from the covariance matrix.